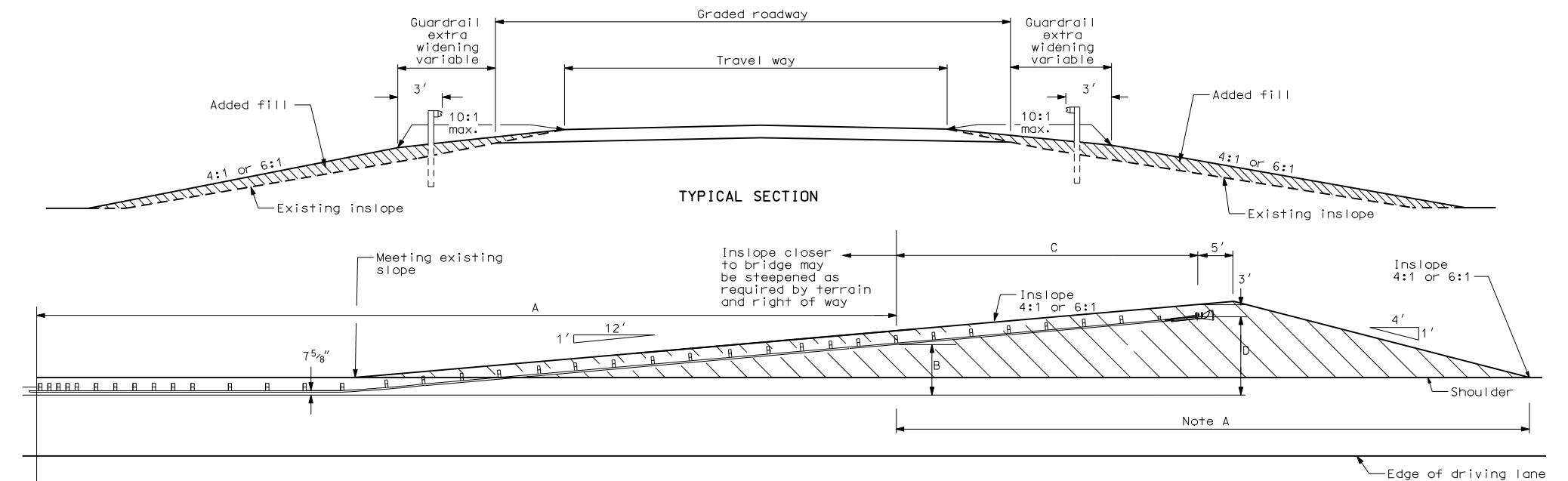


W-BEAM DIMENSION TABLE														
APPROACH SIDE										OPPOSITE SIDE				
		CLEAR ROW WIDTH OF BRIDGE	STRAIGHT AND FLARED GUARDRAIL		END TREATMENT TERMINAL NON-FLARED		END TREATMENT TERMINAL FLARED		STRAIGHT AND FLARED GUARDRAIL		END TREATMENT TERMINAL NON-FLARED		END TREATMENT TERMINAL FLARED	
			A	B	C	D	C1	D1	A	B	C	D	C1	D1
			FT.	FT.	FT.	FT.	FT.	FT.	FT.	FT.	FT.	FT.	FT.	FT.
DESIGN TRAFFIC VOLUME (ADT)	UNDER 250	44	50.7	0.6	50.0	0.6	49.8	4.6	50.7	0.6	50.0	0.6	49.8	4.6
		42	50.7	0.6	50.0	0.6	49.8	4.6	50.7	0.6	50.0	0.6	49.8	4.6
		40	50.7	0.6	50.0	0.6	49.8	4.6	50.7	0.6	50.0	0.6	49.8	4.6
		38	50.7	0.6	50.0	0.6	49.8	4.6	50.7	0.6	50.0	0.6	49.8	4.6
		36	63.1	1.2	49.8	5.3			50.7	0.6	50.0	0.6	49.8	4.6
		34	63.1	1.2	49.8	5.3			50.7	0.6	50.0	0.6	49.8	4.6
		32	75.6	2.2	49.8	6.4			50.7	0.6	50.0	0.6	49.8	4.6
		30	75.6	2.2	49.8	6.4			50.7	0.6	50.0	0.6	49.8	4.6
		28	88.1	3.2	49.8	7.4			50.7	0.6	50.0	0.6	49.8	4.6
		26	88.1	3.2	49.8	7.4			50.7	0.6	50.0	0.6	49.8	4.6
		24	100.5	4.3	49.8	8.4			50.7	0.6	50.0	0.6	49.8	4.6
		44	50.7	0.6	50.0	0.6	49.8	4.6	50.7	0.6	50.0	0.6	49.8	4.6
	42	50.7	0.6	50.0	0.6	49.8	4.6	50.7	0.6	50.0	0.6	49.8	4.6	
	40	63.1	1.2	49.8	5.3			50.7	0.6	50.0	0.6	49.8	4.6	
	38	63.1	1.2	49.8	5.3			50.7	0.6	50.0	0.6	49.8	4.6	
	36	75.6	2.2	49.8	6.4			50.7	0.6	50.0	0.6	49.8	4.6	
	34	75.6	2.2	49.8	6.4			50.7	0.6	50.0	0.6	49.8	4.6	
	32	88.1	3.2	49.8	7.4			50.7	0.6	50.0	0.6	49.8	4.6	
	30	88.1	3.2	49.8	7.4			50.7	0.6	50.0	0.6	49.8	4.6	
	28	100.5	4.3	49.8	8.4			50.7	0.6	50.0	0.6	49.8	4.6	
	26	113.0	5.3	49.8	9.5			50.7	0.6	50.0	0.6	49.8	4.6	
	24	113.0	5.3	49.8	9.5			50.7	0.6	50.0	0.6	49.8	4.6	
	44	50.7	0.6	50.0	0.6	49.8	4.6	50.7	0.6	50.0	0.6	49.8	4.6	
	42	63.1	1.2	49.8	5.3			50.7	0.6	50.0	0.6	49.8	4.6	
	40	63.1	1.2	49.8	5.3			50.7	0.6	50.0	0.6	49.8	4.6	
	38	75.6	2.2	49.8	6.4			50.7	0.6	50.0	0.6	49.8	4.6	
	36	75.6	2.2	49.8	6.4			50.7	0.6	50.0	0.6	49.8	4.6	
	34	88.1	3.2	49.8	7.4			50.7	0.6	50.0	0.6	49.8	4.6	
	32	88.1	3.2	49.8	7.4			50.7	0.6	50.0	0.6	49.8	4.6	
	30	100.5	4.3	49.8	8.4			50.7	0.6	50.0	0.6	49.8	4.6	
	28	113.0	5.3	49.8	9.5			50.7	0.6	50.0	0.6	49.8	4.6	
	26	113.0	5.3	49.8	9.5			50.7	0.6	50.0	0.6	49.8	4.6	
	24	125.4	6.4	49.8	10.5			50.7	0.6	50.0	0.6	49.8	4.6	
	44	75.6	2.2	49.8	6.4			50.7	0.6	50.0	0.6	49.8	4.6	
	42	75.6	2.2	49.8	6.4			50.7	0.6	50.0	0.6	49.8	4.6	
	40	88.1	3.2	49.8	7.4			50.7	0.6	50.0	0.6	49.8	4.6	
	38	88.1	3.2	49.8	7.4			50.7	0.6	50.0	0.6	49.8	4.6	
	36	100.5	4.3	49.8	8.4			50.7	0.6	50.0	0.6	49.8	4.6	
	34	113.0	5.3	49.8	9.5			50.7	0.6	50.0	0.6	49.8	4.6	
	32	113.0	5.3	49.8	9.5			50.7	0.6	50.0	0.6	49.8	4.6	
	30	125.4	6.4	49.8	10.5			50.7	0.6	50.0	0.6	49.8	4.6	
	28	125.4	6.4	49.8	10.5			50.7	0.6	50.0	0.6	49.8	4.6	
	26	137.9	7.4	49.8	11.5			50.7	0.6	50.0	0.6	49.8	4.6	
	24	137.9	7.4	49.8	11.5			63.1	1.2	49.8	5.3			
	44	88.1	3.2	49.8	7.4			50.7	0.6	50.0	0.6	49.8	4.6	
	42	100.5	4.3	49.8	8.4			50.7	0.6	50.0	0.6	49.8	4.6	
	40	100.5	4.3	49.8	8.4			50.7	0.6	50.0	0.6	49.8	4.6	
	38	113.0	5.3	49.8	9.5			50.7	0.6	50.0	0.6	49.8	4.6	
36	113.0	5.3	49.8	9.5			50.7	0.6	50.0	0.6	49.8	4.6		
34	125.4	6.4	49.8	10.5			63.1	1.2	49.8	5.3				
32	125.4	6.4	49.8	10.5			63.1	1.2	49.8	5.3				
30	137.9	7.4	49.8	11.5			75.6	2.2	49.8	6.4				
28	137.9	7.4	49.8	11.5			75.6	2.2	49.8	6.4				
26	137.9	7.4	49.8	11.5			75.6	2.2	49.8	6.4				
24	137.9	7.4	49.8	11.5			75.6	2.2	49.8	6.4				

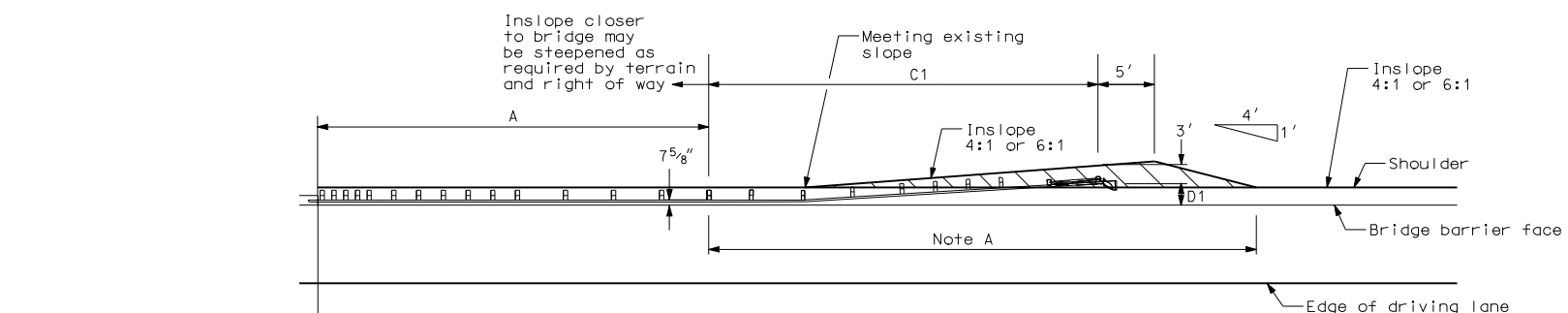
TYPICAL GRADING AT BRIDGE ENDS

WITH
FLARED W-BEAM GUARDRAIL
55 MPH DESIGN SPEED



PLAN LAYOUT

NON-FLARED END TREATMENT



FLARED END TREATMENT

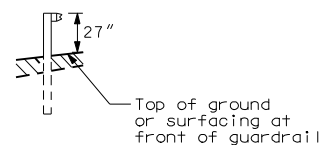
Note:

The design traffic volumes (ADT) shall be as shown on title sheet under traffic forecast.

Where normal inslope is 4:1, the added fill shall be 4:1.

Where normal inslope is 6:1, the added fill shall be 6:1.

Note A: This area may have to be placed at flatter than 10:1 to provide the proper guardrail height.



GUARDRAIL HEIGHT

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
09-01-98	
REVISONS	
DATE	CHANGE
10-29-98	Offset dimensions
12-21-00	Revise flared end treatment
04-02-02	Revised table
12-13-02	Revised table
12-17-03	Revised flared rate detail
12-01-04	PE Stamp added

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